REMARKS

Claims 1-30 are pending. Claims 1-30 are rejected. Applicant acknowledges that the rejections of claims 1-30 under 35 U.S.C. 112, second paragraph are withdrawn and that new grounds of rejection are presented because Applicant's arguments presented in the paper filed on January 19, 2006 were persuasive.

Claims Rejections – 35 U.S.C. §103

Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over International Publication No. WO 97/44766 (the '766 publication) in view of U.S. Patent No. 5,727,951 (Ho).

Regarding claim 1, Applicant is amending the claim to include the feature of "(e) monitoring progress toward the training goal and providing feedback **to the student** that further motivates accomplishment of the training goal tailored to the personality profile of the student, including: (e)(1) evaluating work of the student by training concepts, the training concepts being organized in a hierarchy; (e)(2) selecting pieces of feedback based on the hierarchy and a usage history of specific pieces of feedback text; (e)(3) assembling the pieces of feedback; and (e)(4) delivering assembled feedback to the student." (Emphasis added.) The amendment is supported by the specification as originally filed. For example, the specification discloses (Page 9, lines 11-15. Emphasis added.):

> The following are the key components of the BusSim Toolset. Domain Component – provides services for modeling the state of simulation. Profiling Component – provides services for rule-based evaluating the state of simulation. Transformation Component – provides services for manipulating the state of simulation. Remediation Component – provides services for the rule-based delivering of **feedback to the student**.

The combination of the '766 publication and Ho does not even suggest the feature of "selecting pieces of feedback based on the hierarchy and a **usage history of specific pieces of feedback text**." (Emphasis added.) The Office Action alleges that the '766 publication teaches (Page 3, section 2.):

> ... selecting pieces of feedback based on the usage history of the pieces of feedback (p. 56, 34 - p. 57, 19, p.100, 34 - p. 101, 8, p. 101, 24-32); and assembling and delivering the feedback to the student (p. 109, 29 - p. 111, 17) as in claims 1 and 10. ...

The '766 publication does teach (Page 56, line 34 - page 57, line19. Emphasis added.)

> At this educationally significant event, the materials send to the agent several messages generated by notations in the materials data. In response, the student's agent has chosen to act as illustrated. First, it displays text 506 of the rule violated by the student answer. This text was sent to the agent by the materials in an event message for its use. Second, the on-screen agent points 505 to the screen location of the error. This location was also sent to the agent by the materials. Third, perhaps **in response to a previous high or increasing error rate of the student**, the on-screen agent presents a meta-response 508 commenting on the pedagogic nature of the student's error. Further it activates a persona 507 to engage the student's attention. This persona can advantageously include animation, audio, and speech output of the displayed text. Thus, the agent software integrates speech utterances, visualization, display of text and graphics, and animation into a persona display for highlighting an additional event that the agent determined important based its processing of the current input, **past student inputs in this lesson**, and the student's pedagogic model generated over several sessions.

The '766 publication also discloses (Page 100, line 34 – page 101, line 8. Emphasis added.):

> **Performance data 1112 relates to student's performance** over several lessons in the materials and can include mean performance, weighted moving averages of performance, patterns of performance, use of hints, use of retries, and need remediation. Using such performance data, for example, means and weighted moving averages, permits the agent to determine whether student performance is improving or declining. Tool data 1106 contains essentially similar but more abbreviated data about use of system tools such as the calculator, dictionary, and word processor. This data usually includes only milestones and performance information.

The '766 publication further teaches (Page 101, lines 24-32. Emphasis added.):

> The lesson coaching parameters are used by the agent to provide feedback to the instructional materials so that their presentation can be individualized **according to student performance**. These parameters are governed by the instructional modalities employed by the instructional materials and can include values such as the sending rate of new concepts, time pacing of the presentation, the density of examples, and the ratio of reinforcement.

The '766 publication merely discloses generating response in concert with a performance history relating to inputs from the student but not relating to feedback to the student. Furthermore, Ho fails to remedy the deficiencies of the '766 publication.

Moreover, the combination of the '766 publication and Ho does not even suggest the feature of "assembling the pieces of feedback." As recited by the Office Action, the '766 publication discloses (Page 109, line 29 - page 111, line 17. Emphasis added.):

> Each of these educational paradigms is preferably handled differently by the agent in response to differing descriptive information and student preference data. For example, a sequence of correct responses in a fluency exercise is expected. On the other hand, a sequence of correct responses in a paired associates exercise can be worth while for the agent to comment on.
>
> Exemplary paradigm classification
>
> **The exemplary embodiment of IMTS standardizes these educational paradigms according to three pieces of information: the instructional context, the instrumental format, and most specifically, the subject area.** Materials notations should preferably specify all pieces for maximum agent flexibility, although the ABI system is adaptable to the materials specifying any number or none. If none are specified, agent actions are independent of the educational paradigm.
>
> The instructional context is the specific mode of instruction being presented to the student by the materials. Examples of instructional contexts are:
>
> TABLE 4: EXEMPLARY INSTRUCTIONAL CONTEXTS
> Prerequisite
> Test
> Review
> Pretest
> New Material
> Introduction
> Discrimination
> Review
> Practice
> Fluency Exercise
> Review
> Unit mastery test
>
> Within each instructional context, materials can adopt instructional formats, the second component of the IMIS specification. Examples of instructional formats are:

> TABLE 5: EXEMPALRY INSTRUCTIONAL FORMATS
> Multiple Choices
> Fill-In-the-blank
> Unprompted
> Selected from list
> Paired Associates
> By letter
> By dragging
> By matching
> Computations
> Simulations
> Identify parts of figures or text
> Simulation games
>
> Finally, student performance should preferable be stored relative to the subject area being worked on, as necessary for course level reporting. Thus, the third component of the exemplary IMIS is the subject area, such as mathematics or reading.

The '766 publication merely discloses an educational paradigm (model) that incorporates several modeling aspects (pieces of information) that include the instructional context, the instrumental format, and the subject area. The disclosed pieces of information are not pieces of feedback provided to the student.

Similarly, independent claim 10 includes the features of "logic that selects pieces of feedback based on the hierarchy and a usage history of specific pieces of feedback text" and "logic that assembles the pieces of feedback." Claims 2-9 and 19-24 ultimately depend from claim 1, and claims 11-18 and 25-30 ultimately depend from claim 10. Applicant requests reconsideration of claims 1-30.

Moreover, regarding claims 22 and 28, the Office Action alleges that the '766 publication teaches (Pages 3-4, section 2):

> Regarding claims 20-22 and 26-28, the features of determining the presentation either by providing additional tasks (remediation) or removing tasks are shown on page 20, lines 7-14.

The '766 publication does disclose (Page 20, lines 7-14):

> Second, the student can advance to the next item, lesson, or unit. Third, in case of error, the student can request, or automatically be presented with, appropriate

repeat, review, or remediation materials. Finally, at a higher level these patterns of interactions can be analyzed to provide more adaptive responses from the system.

The '766 publication merely discloses advancing to the next lesson, repeating the lesson, reviewing the lesson, or including remediation material. However, the '766 publication does not even suggest the features of "**removing** a task that is associated with an associated training area that the student has adequately mastered" and "logic that **removes** a task that is associated with an associated training area that the student has adequately mastered." (Emphasis added.)

It is respectively submitted that the present application is in condition for allowance, and a Notice to that effect is earnestly solicited.

Respectfully submitted,

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